

Passive Radon System

Passive radon systems are commonly installed in new construction homes to provide a pathway for radon gas to vent safely above the roofline if needed. This technical bulletin outlines what a passive radon system is, what the builder provides, and what homeowners should understand after moving in.

1. What is Radon and Why It Matters

The main points to understand about radon are:

- **Naturally Occurring Gas:** Radon is an invisible, odorless gas that forms naturally in the soil.
- **Health Risk:** Long-term exposure to elevated radon levels has been linked to an increased risk of lung cancer.
- **Testing Is Essential:** Radon levels vary from home to home. The only reliable way to determine the radon level in your home is to conduct a test after occupancy.

The United States Environmental Protection Agency (EPA) recommends taking corrective action if radon levels are at or above 4 picocuries per liter (pCi/L).

2. What a Passive Radon System Is

A passive radon system is a non-mechanical system installed during construction. It typically consists of:

- A vent pipe installed beneath the concrete slab or crawl space
- A vertical PVC pipe that runs through the home
- A termination point above the roofline
- An electrical outlet installed near the pipe for potential future fan installation

The system provides a pathway for radon gas to rise and vent above the home.

Important: *A passive system does not actively remove radon gas. It is designed so that a fan can be added later (activating the system) if testing indicates elevated radon levels.*

3. What the Builder Provides

The builder's responsibility typically includes:

- Installing a continuous vent pipe from below the slab through the roof
- Providing an electrical outlet near the pipe for future fan installation
- Informing you of the system's location and how it is configured
- Supplying basic documentation describing how the system can be activated if needed



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4. What You Should Do as a New Homeowner

1. Test Your Home for Radon Soon After Moving In

- Testing establishes a baseline radon level after occupancy.
- Even with a passive system installed, testing is necessary to determine if activation is required.

Radon test kits are widely available, or professional testing services may be used.

2. Understand Your Passive System

- Confirm where the vent pipe terminates (above the roof or within the attic space).
- Learn how a fan would be added if elevated levels are detected.
- Keep documentation, photos, or a simple sketch of the system for your home records.

3. If Radon Levels Are Elevated

- The homeowner is responsible for determining next steps.
- If testing shows radon levels at or above EPA guidelines, the passive system can be activated by installing a radon fan.
- Activation should be performed by a qualified, DEP-certified radon mitigation professional.

4. Retest Periodically

- Even if initial results are low, retesting every few years is recommended.
- Retesting is especially important after major renovations, structural changes, or ventilation modifications.

5. Radon and Your Home Sale (Pennsylvania)

Known radon test results must be disclosed to buyers.

- Maintaining documentation of testing and any mitigation efforts can be a positive selling point.
- A passive or activated radon system demonstrates that the home was constructed with radon considerations in mind.

A passive radon system is an important built-in feature designed to simplify mitigation if elevated radon levels are ever detected. Routine testing and proper documentation help ensure a safe and informed homeownership experience.